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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/805,055	03/19/2004	Matthew R. Sivik	3246	7978

7590 07/02/2008  
THE LUBRIZOL CORPORATION  
Patent Administrator - Mail Drop 022B  
29400 Lakeland Boulevard  
Wickliffe, OH 44092-2298

EXAMINER
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LANG, AMY T

ART UNIT	PAPER NUMBER
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3731

MAIL DATE	DELIVERY MODE
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07/02/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/805,055

**Applicant(s)**

SIVIK ET AL.

**Examiner**

AMY T. LANG

**Art Unit**

3731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 and 11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date: \_\_\_\_\_

## DETAILED ACTION

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/18/2008 has been entered.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. **Claims 1-8 and 11** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 1 and 11 recite wherein "the polymer is free of non-monomeric amines with primary functionality, secondary functionality, or mixtures thereof." However, it is the examiner's position that the instant specification does not support this limitation. The instant specification merely teaches that "the amines when present are in an

effective amount" (see page 10, lines 14-15 of the instant specification). This effective amount is from about 0 to about 1 (see page 10, lines 16-18 of the instant specification). However, the instant specification does not explicitly teach wherein no amines, with functionality, are present. A mere teaching of a broad range of a component in a composition does not provide support to specifically exclude that component from the composition.

Additionally, the instant specification teaches wherein the polymer does not contain Mannich base functionality wherein "a Mannich base is formed by the reaction of (a) aldehyde, with (b) phenols and (c) at least one non-monomeric amine" (see page 10, lines 21-24 of the instant specification). This also does not explicitly provide support to exclude non-monomeric amines. This disclosure merely supports the exclusion of Mannich bases, not non-monomeric amines.

Claims 2-8 are dependent on claim 1 and therefore are also not supported by the specification.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. **Claim 8** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8 recites wherein the esterified polymer contains at least one reacted amine. However, claim 1, from which claim 8 depends, recites wherein the polymer is

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free of amines with functionality. Therefore, it is unclear as to how the polymer can comprise an amine when that limitation is excluded in claim 1.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. **Claims 1-8 and 11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Tipton (US 5,354,485) in view of Lange (US 6,258,761).

With regard to **claims 1-4 and 8**, Tipton discloses a grease composition comprising an esterified polymer, a thickening agent, and an oil of lubricating viscosity (see entire document). The composition comprises an esterified maleic anhydride-styrene copolymer, which clearly overlaps the instant claims (column 21, lines 19-28). Although Tipton does not specifically disclose the wt% of the polymer in the composition, Tipton teaches 1 wt% of a post-treated esterified maleic anhydride-styrene

copolymer in Example IX (column 23, lines 23-26). Since the post-treated polymer is merely expressed in an example, it would have been obvious to one of ordinary skill in the art at the time of the invention for the esterified maleic anhydride-styrene copolymer to also be utilized at 1 wt%.

Furthermore, Example IX only teaches a lubricant composition. However, Tipton discloses that thickening agents are added to the lubricant composition to produce grease (column 23, lines 55-65). The disclosed thickeners include hydroxystearic acid, which overlaps the instantly claimed metal salt of a carboxylic acid (column 23, line 66 through column 24, line 9). Other thickening agents include clay, specifically bentonite (column 24, lines 10-24).

Tipton is silent regarding the total acid number (TAN) of the esterified polymer. Lange discloses a lubricating composition comprising an esterified maleic anhydride-styrene copolymer with specific TAN values of 15 and 12.2 (column 1, lines 4-7; column 8, lines 56-53; Example A-1 and Example A-1, column 15). Since Tipton discloses a lubricating composition, wherein a thickening agent is added to produce the grease, with an esterified maleic anhydride-styrene copolymer and Lange also teaches a lubricating composition with an esterified maleic anhydride-styrene copolymer having a specific TAN value, it would have been obvious to one of ordinary skill at the time of the invention for the polymer of Tipton to also have a TAN value as taught by Lange.

Although Tipton in view of Lange does not specifically disclose the water wash off properties of the produced grease composition, it is the examiner's position that the

composition would intrinsically comprise these properties since it overlaps the instant claims.

With regard to **claim 5**, since Tipton specifically discloses an esterified polymer, it would have been obvious to one of ordinary skill at the time of the invention for almost all the maleic anhydrides, about 99.5%, to be converted to ester groups.

With regard to **claims 6 and 7**, Tipton discloses the polymer esterified with C<sub>8-18</sub> and C<sub>4</sub> alcohols, which clearly overlaps the instant claims (column 23, lines 23-26).

With regard to **claim 11**, since Tipton discloses an esterified copolymer derived from monomers of styrene and maleic anhydride, the method steps of mixing the two components to form a polymer, reacting the polymer with two alcohols, and adding the final product to lubricating oil with a thickening agent is intrinsically met. However, if applicant were to argue that Tipton does not disclose mixing the two components with a solvent, Lange also discloses a method to produce the esterified copolymer wherein a solvent is specifically utilized (column 13, lines 4-20).

### ***Response to Arguments***

9. Applicant's arguments filed 04/18/2008 have been fully considered but they are not persuasive.

Specifically, applicant argues (A) Tipton comprises a polymer comprising non-monomeric amines with functionality by disclosing aminopropyl morpholine in Example IX.

With respect to argument (A), Tipton teaches utilizing an esterified maleic anhydride-styrene copolymer as a dispersant in a grease composition (column 21, lines 19-28). Since Tipton does not specifically disclose the amount of polymer in the composition, Example IX was utilized to show the wt% of a post-treated copolymer in a composition. The post-treatment comprises aminopropyl morpholine. As stated above, this example was provided merely to show the amount of copolymer utilized in one example so that it would have been obvious to utilize the non-post-treated copolymer in that same amount in the grease composition. Therefore, it would have been obvious for Tipton to utilize the esterified maleic anhydride-styrene copolymer in a grease composition in the same amount as the post-treated esterified maleic anhydride-styrene copolymer in Example IX. This would produce a composition that does not contain the aminopropyl morpholine.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AMY T. LANG whose telephone number is (571)272-9057. The examiner can normally be reached on M-F 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Todd Manahan can be reached on 571-272-4713. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for



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published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

06/25/2008

/Amy T Lang/

Examiner, Art Unit 3731

/Todd E Manahan/

Supervisory Patent Examiner, Art Unit 3731